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ABSTRACT

In response to statistics indicating the extent of drug abuse in the United States, a variety of public and private agencies have attempted to inform the mass public regarding the dangers involved in illicit drug abuse. However, there has been little examination of the target audiences themselves so that their responses might be employed as a criterion for evaluating informational efforts. Discussed in this paper is a set of interrelated studies describing research efforts aimed at determining the structure of student reactions to drug abuse messages. Initial comparisons of alternative messages based on such audience perceptions are also presented. A veriety of physiological and paper-and-pencil measures of three basic component aspects of perceiver response arousal, information acquisition, and evaluation were used to examine the range of relevant target audience responses. (Author/LG)

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Drug Abuse Information in the Mass Media: Studies of Information Impact

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In response to statistics indicating the extent of drug abuse in the United States, a variety of public and private agencies have attempted to inform a mass public regarding the dangers involved in illicit drug use. Several of these sponsored information campaigns have publically expressed envisioned goals. Grey Advertising, originally commissioned by NIMH to disseminate drug abuse communications, stressed the need to "arm potential tasters among this country's youth with facts which might help them resist peer group pressure."[1] The National Institute of Mental Health emphasized an informational strategy to increase general awareness and understanding with the ultimate aim of preventing drug abuse.[2] Despite some general agreement on the ultimate goals of this extensive informational effort, however, no systematic inquiry has been addressed toward the determination of the actual effectiveness of such effort. Evaluation of drug abuse materials, when attempted, has frequently consisted of some sort of inter-judge agreement among certain experts in the "communication" field (for example, the National Coordinating Council's panel of critics, actors, former drug users, educators and psychologists).

Little has been done, however, in examining the target audiences themselves so that their responses might be employed as a criterion for evaluating informational efforts. Despite the fact that some form of systematic audience response assessment is customarily employed in evaluating information campaigns by product merketers, little has been done in terms of assessing the effects of public service campaigns, even though the problems addressed by these campaigns (drug abuse; alcoholism; family planning) have acknowledged social significance. In response to this apparent lack of systematic evaluation of audience response, a program of research has been undertaken at the University of Connecticut (entitled DAIR: Drug Abuse Information Research) comprising to date some 13 studies investigating the extent and impact of drug abuse information. The present paper summarizes some of the findings specifically addressed to examining audience responses to televised "persuasive" drug abuse advertisements.

* Computer time for statistical analyses were provided through the facilities of the University of Connecticut Computer Center and were supported by NSF Grant GJ-9 to the Computer Center.

1 reported in Editor and Publisher, Sept. 6, 1969.

2 A Guide to Drug Abuse Information and Education Materials. National Institute of Mental Health.

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Introduction. One requisite component of any examination of receiver response to perceptual stimuli is a systematic examination of the range of responses exhibited. A determination of the set of varied responses manifested by audience members should precede any attempt to evaluate or draw implications from the responses thus observed. One available approach for the examination of hypothetical simple structures underlying such sets of perceptual response has been that of factor analysis.

In a series of studies bearing on the present investigation, Leavitt (Leavitt, 1969; Wells, Leavitt and McConville, 1971) employed subject-generated unipolar descriptive terms in assessing perceiver evaluations of television commercials. Drawing from an initial word pool of some 700 terms, a final set of 71 descriptors were judged by viewers across a variety of product commercials. Analysis of viewer judgments of term applicability resulted in six stable factors: Humor (amusing; playful); Vigor (exciting; energetic); Sensuousness (tender; soothing); Uniqueness (imaginative; novel); Personal Relevance (valuable; meaningful for me); Irritation (terrible; stupid).

The factors of response reported by Leavitt apply, however, to persuasive advertising for consumable products (tuna fish; cereals; washing machines) and thus the generality of such factors to situations where advertising is aimed at the solution of a social problem is of necessity suspect.

The following set of interrelated studies describe research efforts aimed at determining the structure of student reactions to drug abuse messages (perception of messages; perception of drugs) and presents initial comparisons of alternative messages based on such audience perceptions. More complete descriptions are available in several DAIR reports (McEwen, 1972; Hanneman and McEwen, 1972; McEwen and Wittbold, 1972; McEwen, 1972b).

Procedures. A total of 207 subjects responded to one of five commercial stimuli. Subjects were students from introductory communication courses at the University of Connecticut fulfilling course research participation requirements. Films were selected so as to judgmentally represent a range of currently employed message strategies.[1] Responses to the commercial film stimuli were indexed in part by means of a post-message self administered questionnaire consisting of five main parts.[2]

1 All stimuli were 60-second color commercials. Two of the tested commercials were previously obtained NIMH-sponsored ads: "The Truth About Marijuana" and "Where Are We Then?"; the other three ads were obtained more recently from the BNDD: "Ten Little Indians;" "Big Brother;" "Today's Society."

2 Galvanic Skin Response measures were also obtained from all subjects, but the physiological response results will be reported at a later data, pending more complete analysis.

The first section of the questionnaire consisted of 38 descriptor terms which could be applied to drug abuse communication stimuli. These terms were derived from respondent-generated terms which were previously factor analyzed (McEwen, 1972). The remainder of the questionnaire consisted of a risk-orientation questionnaire adapted from Carney (1970)[1] plus four subsections assessing response to particular drugs: marijuana (38 terms); heroin (35 terms); alcohol (27 terms); amphetamines (35 terms).[2] Respondents indicated the extent of perceived applicability of the descriptor terms to the particular commercial viewed and then to the four individual drugs by means of five-interval scales ("fits extremely well" to "does not fit at all").

All subjects were tested individually in a simulated living-room environment designed to provide minimal distraction while approximating more normal TV viewing conditions. Subjects were randomly assigned to one of five commercial treatment conditions and all responses were recorded on anonymous questionnaires to aid in ensuring truthfulness. After compleing a short initial pretest,[3] subjects were seated in a large comfortable chair and electrodes were attached to the right hand using standard collars. Following a four-minute baseline GSR measurement, each subject viewed one film (projected via standard 16mm sound cameras) and subsequently completed post-message ratings in an adjoining room.

Results. Results of the study are presented separately below. For factor analytic purposes, commercial treatment conditions were disregarded and combined analyses were conducted on all 207 subjects.

Factor Analyses.

Commercial Perception Factors: Obtained rating data resulted in a stable structure of three main dimensions, in partial replication of the earlier data. The three factor solution satisfied the criteria for factor retention (no factors retained which did not have at least three items loading above .40 on the factor and less than .35 on all other factors). The table below reports the highest six loadings on each of the factors.

Table 1.
Commercial Factors

Factor 1 "Relevant Information"		Factor 2 "Dynamic Creativity"		Factor 3 "Hard Sell"	
Makes Sense	.80	Unique	.76	Threatening	.64
Worth Rem'bring	.73	Original	.75	Scary	.66
Convincing	.72	Creative	.72	Disturbing	.60
Thought-Prvking	.63	Different	.70	Depressing	.54
Informative	.62	Novel	.67	*Overdone	.48
Believable	.62	Powerful	.65	Hard Sell	.44

* indicates lack of purity (item loads above .35 on some other factor)

Drug Response Scales: Table 2 below presents the results of the obtained evaluations of the four drugs tested. Similar factor retention criteria were employed for each drug (identical to that listed for the commercial perception scales), resulting in a three factor solution for marijuana and alcohol, a four-factor solution for amphetamines, and a five factor solution for heroin.

Table 3.
Drug Perception Factors

	Drugs Tested			
	Marijuana	Alcohol	Amphetamines	Heroin
Factor I	"Riskiness-Artificiality"	"Riskiness-Artificiality"	"Riskiness"	"Dangerous Escape"
	a crutch	a crutch	risky	frightening
	addictive	distorting	scary	distorting
	distorting	used for escape	leads to harder drugs	a crutch
	dangerous	addictive		a cop-out
Factor II	"Personal Utility"	"Personal Utility"	"Relaxation"	"Personal Utility"
	beneficial	beneficial	for happy occasions	for me
	rewarding	for me	educational	rewarding
	educational	rewarding	peaceful	necessary
	useful	useful		beneficial
Factor III	"Social Relaxation"	"Social Relaxation"	"Excitement"	"Thrill"
	relaxing	for use with friends	stimulating	stimulating
	peaceful	recreational	useful	exciting
	mild	relaxing	exciting	mind-expanding
	for use with friends		makes you alert	useful
Factor IV	---	---	"Popularity"	"Harmfulness"
			popular	risky
			common	harmful
			recreational	addictive
Factor V	---	---	---	"Social Relaxation"
				relaxing
				peaceful
				for use with friends

Message Perception Comparisons. The following tables report the results obtained via the post-test perceptual scale measures.

Table 3.
Commercial Perceptions

	10 Little Indians (n=47)	Big Brother (n=41)	Truth About MJ (n=40)	Today's Society (n=39)	Where Are We Then? (n=40)
Relevant Information *	32.21	33.85	32.15	32.87	27.72
Dynamic Creativity *	25.68	23.54	18.85	20.72	17.18
Hard Sell *	17.49	13.98	13.08	14.10	10.12

* Factor Scores represent sums of individual scales: Relevant Information (sum of 10 scales); Dynamic Creativity (sum of 8 scales); Hard Sell (sum of 6 scales)

Table 4.
Marijuana Perceptions

	10 Little Indians	Big Brother	Truth About MJ	Today's Society	Where Are We Then?
Riskiness-Artificiality **	25.02	24.83	28.05	25.49	26.52
Personal Utility **	19.77	19.76	18.15	18.56	18.95
Social Relaxation **	12.68	12.49	12.10	12.67	12.50

** Riskiness (sum of 11 scales); Personal Utility (sum of 8 scales); Social Relaxation (sum of 4 scales)

Analysis of variance data for the commercial perceptions and drug perception scales above indicated significant ($p<.05$) differences in terms of evaluations of the message (relevance, dynamic creativity and hard sell) but not in terms of perceptual responses to marijuana itself.

Discussion. Commercial perceptions indicated some difference, as anticipated, from the dimensions of response to more typical product commercials (Leavitt, 1969). To the extent that both the aims of

the message producer and the needs of the audience differ in these two types of message appeals, such differences (e.g. the disappearance of a humor factor and the relatively greater importance of the personal relevance factor) are hardly surprising.

Student perceptions of the four drugs tested indicate, perhaps surprisingly, somewhat greater complexity of response to the "harder" and presumably riskier drugs (heroin) than to the "softer" drugs, despite subjects' indications on pretest questionnaires of relatively greater familiarity with the latter. Thus it would seem that complexity of response structure need not vary directly with actual experience with the stimulus judged. In addition, it is noted that quite similar response structures are evidenced for alcohol and marijuana. Although this might well be expected to differ in a less drug-liberal situation, it does provide some insight in terms of addressing message strategies to similar student populations. It would appear that anti-"drug" messages might well be too all-encompassing and that concentration should rather be made in comparing perceived comparable drugs, or in terms of affecting single dimensions of audience response (e.g. perceived popularity of the drug or perceived suitability for informal/friendly occasions).

The commercial perception factors evidence promise in terms of differentiating between types of strategies. Such differentiation is of course not tantamount to or synonymous with message "impact." As feedback to message producers and as general guidelines for message construction, they do however show merit. As was previously seen to be the case (McEwen and Wittbold, 1972), the Hard Sell dimension seems capable of consistent differentiation. Such information might well be combined with perceptions of message relevance and source credibility to predict the feasibility of employing highly emotional or fear-arousing messages (cf. Higbee, 1969).

The lack of overall differences for the marijuana perceptual factors may simply reinforce previous research regarding the relative lack of ability of media-disseminated messages to change stable perceptions (Klapper, 1960). Still, the potential for more long-term effects and for subtler changes in audience perceptions (Schramm and Roberts, 1971) exists. Examination of individual item scores suggests, for example, somewhat greater perceptions of risk and danger from using marijuana resultant from viewing the "Truth About Marijuana" ad. Still, not all messages were specifically addressed to the use of this particular drug and hence the present study does not allow for an adequate test of the sensitivity of drug perception factors.

Additional footnotes

pg. 3: 1. The risk-orientation section consisted of 10 statements regarding possible behaviors (drinking; driving rapidly; stealing more than $50; using various illicit drugs) plus five goal statments (regarding the extent to which coping, security or thrill seeking are sought), each accompanied by five-interval scales.

2. Descriptor terms utilized in the drug perception ratings were obtained from subject-generated free responses to open ended questions regarding perceptions of individual drug categories (e.g. psychedelics, opiates, cannabis drugs). This preliminary pilot testing was done during the Spring term of 1972 using a total of approximately 275 students from an advanced mass communication theory course at the University of Connecticut.

References

Note: Referenced DAIR Reports may be obtained from the list on the attached page.

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1. "Televised Drug Appeals: A Content Analysis," Gerhard J. Hanneman, William J. McEwen, Gail F. Isbell and Deborah M. Durham, March 1972, (Revised).

2. "Dimensions of Response to Public Service Drug Abuse Information," William J. McEwen with George Wittbold, April 1972.

3. "Dissemination of Drug Related Information," Gerhard J. Hanneman, April 1972, (Revised).

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5. "Interaction Patterns Among Drug Dealers," Robert L. Atkyns and Gerhard J. Hanneman, May 1972, (Revised).

6. "Assessing the Persuasiveness of Drug Abuse Information," William J. McEwen and George H. Wittbold, May 1972.

7. Not Available.

8. "An Experimental Analysis of Reaction to Filmed Drug Abuse Information," Gerhard J. Hanneman and William J. McEwen, June 1972.

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